

The logo for EYTECH, featuring the company name in a white, sans-serif font on a dark blue background.

IRIO/TWS

LIGHTING CONTROLLER

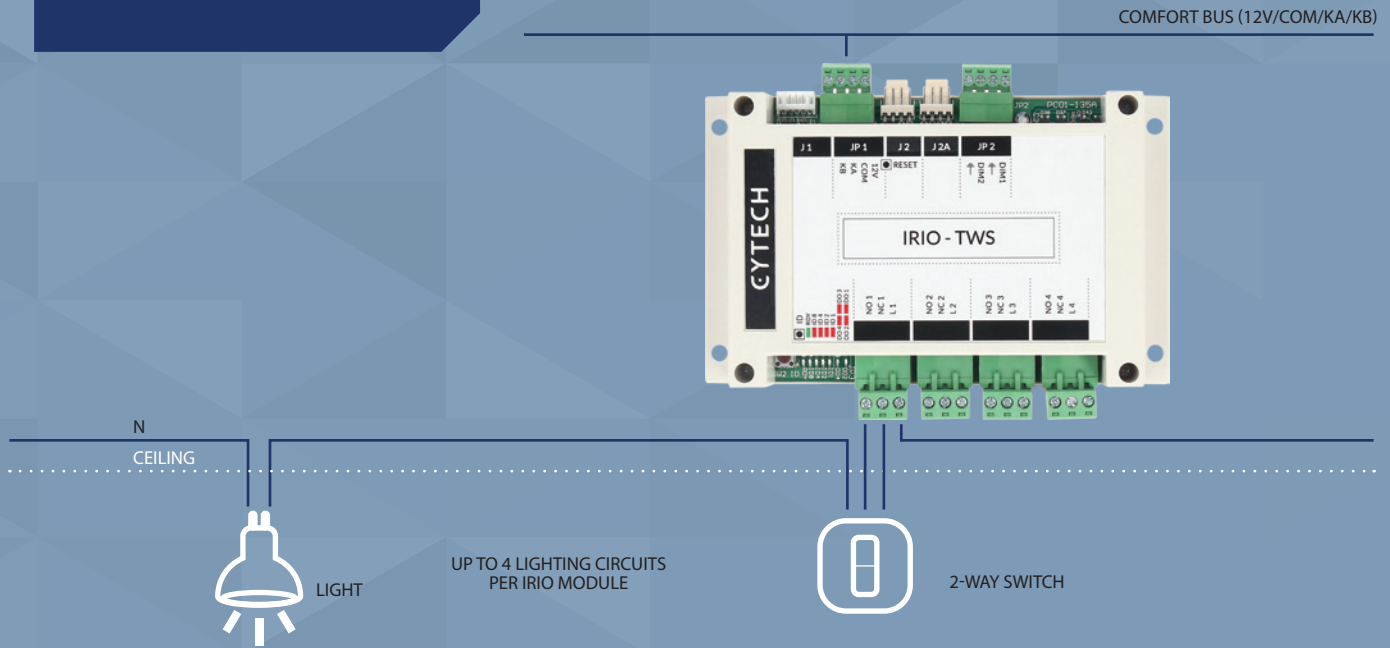
LOGIC CONTROLLER FOR LIGHTING CIRCUITS

IRIO/TWS includes 4 on/off control circuits for lighting control using mechanical 2-way switches and 2 x 0-10V outputs for dimming.

Each lighting circuit consists of a Latching Relay (for on/off control) and a Current Sensor to sense the state of the light.

Latching Relays remain at the last Open/Close state without current in the relay coil to save energy.

As conventional switches and wiring is used, mechanical 2-way switch control is retained, even if Comfort or IRIO is not working.

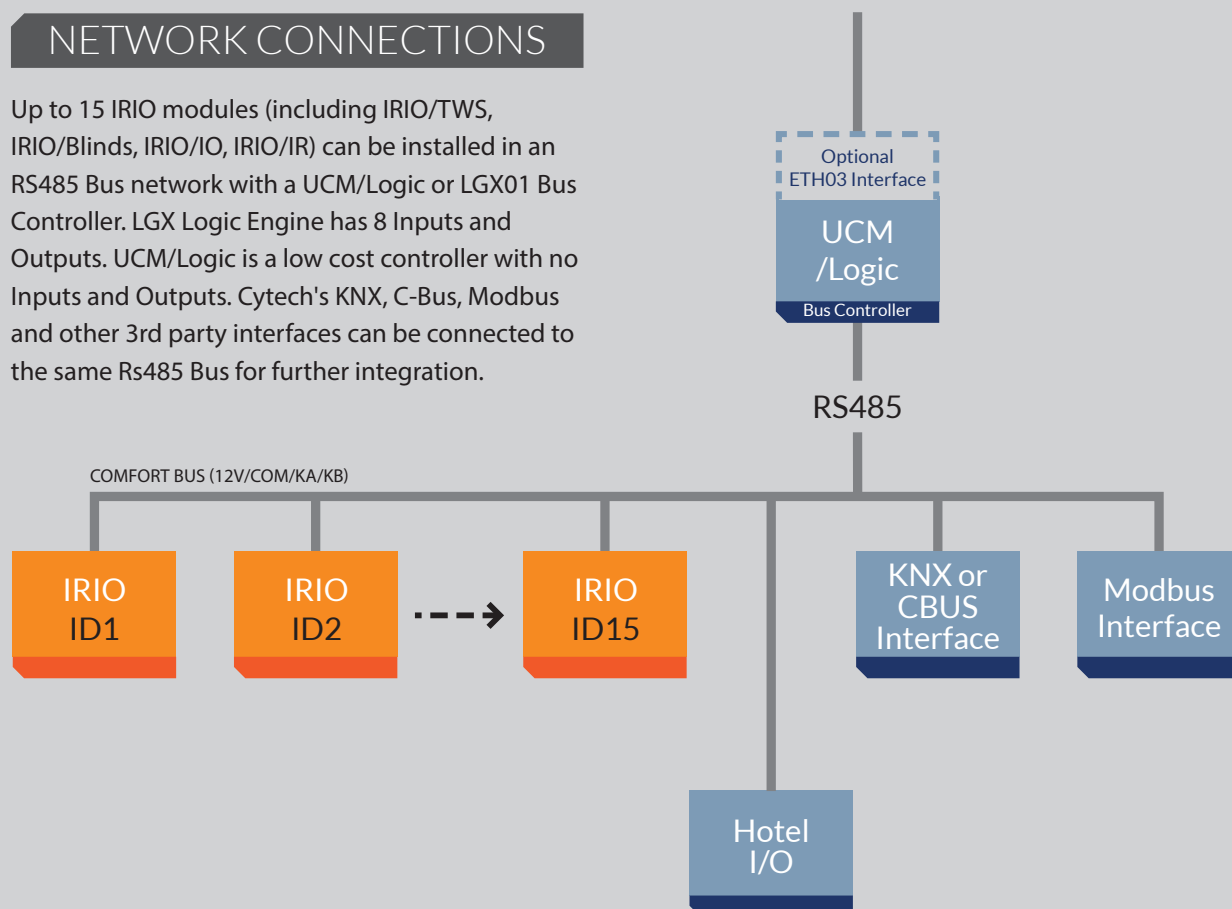


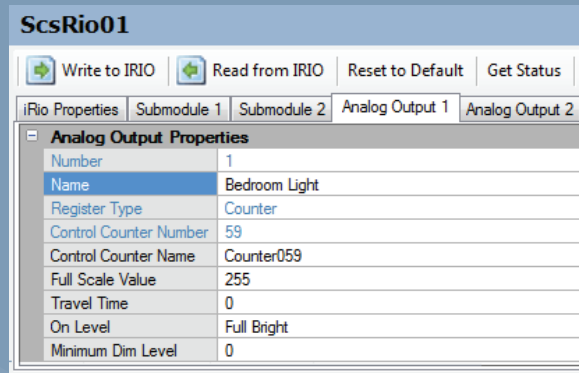
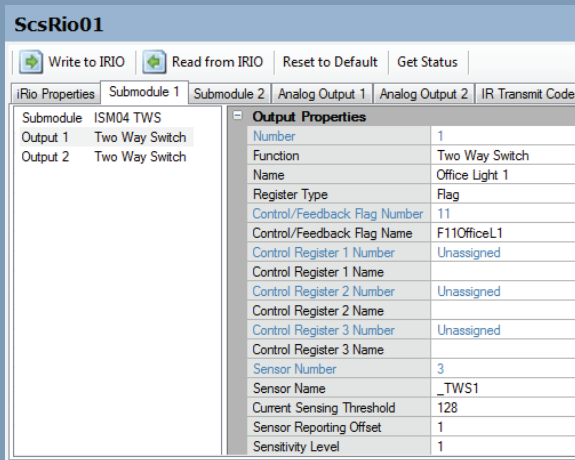
EXAMPLE CONNECTIONS FOR LIGHTING CONTROL

The diagram shows how IRIO/TWS can control a light via a 2-way switch. The IRIO/TWS can be mounted in the ceiling and connected to the mechanical 2-way switch. The only change in conventional wiring is that an additional switch wire is required for the 2-way switch. By this arrangement, the mechanical switch will continue to work even if the IRIO/TWS becomes faulty.

NETWORK CONNECTIONS

Up to 15 IRIO modules (including IRIO/TWS, IRIO/Blinds, IRIO/IO, IRIO/IR) can be installed in an RS485 Bus network with a UCM/Logic or LGX01 Bus Controller. LGX Logic Engine has 8 Inputs and Outputs. UCM/Logic is a low cost controller with no Inputs and Outputs. Cytech's KNX, C-Bus, Modbus and other 3rd party interfaces can be connected to the same Rs485 Bus for further integration.





PROGRAMMING

The IRIO/TWS is easy to program using the Configurator Software

Each lighting switch is mapped to 3 Flags and a Sensor. Setting or clearing the Flag switches the light on or off. The Actual status of the light is always updated to the Control/Feedback Flag.

The mapped Sensor shows the current level measured by the built in current sensor. The Current sensing threshold sets the current level which determines the light to be OFF or ON to cater for lights of different efficiencies. The Sensitivity Level selects one of 2 sensitivity levels, high sensitivity for low current lights like LED lights, and low sensitivity for conventional lights.

Each IRIO/TWS also includes 2 x 0-10V outputs for the control of suitable dimmable lights. Each 0- 10V outputs is mapped to a Counter so that setting a value to the counter sets the dimming level from 0 to 255. The Full Scale Level can have 255 or 99 value for the counter. Travel time is the time taken for the voltage to go from 0 to 10 and vice versa. On Level is either Full Bright or Last Level (memory) when the output is switched on to full scale.

APP CONTROL

Free mobile apps can be used to view the status and control connected lighting as well as blinds, heating, air-conditioners and other appliances.

EXTERNAL INTERFACES

IRIO interfaces to Modbus, KNX, C-Bus, Hotel I/O are possible via Cytech UCM Interfaces.



SPECIFICATION

- Low Power Microcontroller with Flash memory for firmware and configuration settings.
- Power Supply: 12V 1 Amp DC
- Analog Outputs: 2 x 0-10V DC
- Bus Communications: Up to 15 IRIOs on RS485 network.
- Din Rail Enclosure: 145 x 90 x 40 mm
- No of Latching Relays: 4
- Switching Capacity: 277VAC, 6A
- Mechanical Life: 3 million cycles
- Electrical Life: 50,000 cycles
- Coil Current: 33 mA while switching, 0 Hold current
- Current Sensitivity: Minimum 0.4 mA RMS

ABOUT THE IRIO RANGE

The IRIO01 Intelligent Remote Input/Output Modules are a series of general purpose automation products capable of a wide range of control functions including Digital Inputs, Digital Outputs, Analog Inputs (0-10V), Analog Outputs (0-10V), Temperature and Light level sensing. This allows the control of HVAC, Blinds, Infrared signal transmission, and 2-Way Switch Lighting.

IRIO modules are easy to program and requires little wiring. Up to 15 IRIOs can be installed in a system which can be controlled by the Comfort Alarm/Automation System, LGX01 Logic Engine or the UCM/Logic Controller. IRIO can be used in standalone mode when no control from other systems or other IRIOs is required.

IRIO MODELS

- IRIO/TWS Two Way Lighting module with 4 lighting circuits, 2 x 0-10V outputs
- IRIO/Blinds with 2 blinds controls, 2 x 0-10V outputs
- IRIO/IR Infrared Transmission Module with Current sensor feedback
- IRIO/IO Digital I/O module with 8 Digital Outputs, 8 Analog/Digital /Temperature/Lux Sensor Inputs. IRIO/RLY01 Relay module can be connected directly.
- IRIO/RLY01 Relay Module with 8 Relays with Normally Open/Normally Closed Contacts. This can be connected to IRIO/IO.

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